

This listing of claims will replace all prior versions, and listing of claims in the application:

Listing of claims:

Claim 1 (currently amended) A device for the heating of a liquid in a beverage machine comprising

at least one set of at least two resistors, ~~wherein~~ said resistors are electrically linked together so as to use one resistor of each set individually or in serial with one or more of the resistors of the same set; and

at least one individual resistor and at least one set of at least two resistors, ~~wherein~~ said at least one individual and at least one set of at least two resistors are electrically linked together so as to use the first resistor of a set individually or in serial with one or more of the following resistors of the same set, said resistors transferring the maximum of energy to ~~the~~ a flow of liquid in the beverage machine and allowing a finer control of the a liquid temperature of the liquid.

Claim 2 (currently amended) A device according to claim 1, wherein the set of at least two resistors and at least one individual resistor are ~~system of resistors~~ disposed on a tube, the flow of liquid flowing ~~being~~ in said tube.

Claim 3 (currently amended) A device according to claim 2, ~~wherein it comprises further comprising~~ a cylindrical insert, which is located ~~disposed~~ inside the tube, along its the entire length of the tube and substantially along its the axis of symmetry of the tube.

Claim 4 (currently amended) A device according to ~~any of claims 2 or~~ claim 3, wherein the insert comprises helicoidal grooves on its an outside surface.

Claim 5 (currently amended) A device according to ~~any of claims 2 to 4~~ claim 3, wherein a spring is disposed positioned around the insert.

Claim 6 (currently amended) A device according to ~~any of claims~~ claim 2 to 5, wherein the ratio of the length to the diameter of the tube is ~~comprised~~ between about 5 and about 40.

Claim 7 (currently amended) A device according to ~~any of claims~~ claim 3 to 5, wherein the insert is comprised of an insulated material, selected taken from the group consisting of plastic, metal and ceramic.

Claim 8 (currently amended) A device according to ~~any of claims~~ claim 3, 4 or 7, wherein the insert is ~~fixed or can be rotated along its axis of symmetry~~.

Claim 9 (currently amended) A device according to ~~any of claims~~ claim 3 to 8, wherein the insert can be is rotated along its axis of symmetry due to a because of its connection of said insert to with a rotating wheel of a flowmeter disposed at the a lower part of said insert.

Claim 10 (original) A device according to claim 9, wherein the rotatable cylindrical insert comprises a wire brush.

Claim 11 (currently amended) A device according to claim 1, wherein the set of at least two resistors ~~system of resistors~~ is ~~disposed~~ positioned on a flat base, the flow of liquid flowing ~~being~~ through channels, which are positioned along the resistor tracks.

Claim 12 (currently amended) A device according to claim 11, wherein the channels for the flow flowing of the liquid have a reduced section area, so that the flow of liquid flow reaches a turbulent flow.

Claim 13 (currently amended) A device according to ~~any of claims~~ claim 1 to 12, wherein the ~~different electrical~~ resistors are ~~made in~~ have a form selected from the group consisting of wires, and thick-film resistors.

Claim 14 (currently amended) A device according to ~~any of claims~~ claim 1 to 13, wherein all of the electrical resistors have a power density of up to 15 to 70 Watt/cm².

Claim 15 (currently amended) A device according to ~~any of~~ claim 2, wherein the hollow tube ~~comprises~~ includes enamel painting on its an outside portion under the resistors.

Claim 16 (currently amended) A device according to ~~any of claims~~ claim 1 to 15, wherein the ~~electrical~~ resistors are ~~covered or~~ insulated with an electrically non conductive material.

Claim 17 (currently amended) An apparatus for the heating of a liquid comprising a liquid supply,
a pump for supplying pumping said liquid to
a device for heating a said liquid ~~according to any of claims 1 to 16, comprising at least one first set of at least two resistors, said resistors are electrically linked together so as to use one resistor of each first set individually or in serial with one or more of the resistors of the same set, and at least one individual resistor and at least one second set of at least two resistors, said at~~

least one individual and at least one second set of at least two resistors are electrically linked together so as to use the first resistor of a second set individually or in serial with one or more of the following resistors of the same set, said resistors transferring the maximum of energy to the flow of liquid and allowing a finer control of the liquid temperature wherein said liquid flows from the water supply through a flow path tube or channels in said apparatus,

~~a way for the exit of heated liquid, either on a substance to be extracted or in a mixer to mix said heated liquid with a powder.~~

Claim 18 (currently amended) A process for heating a liquid comprising the steps of passing a liquid through a device comprising at least one first set of at least two resistors, said resistors are electrically linked together so as to use one resistor of each first set individually or in serial with one or more of the resistors of the same set, and at least one individual resistor and at least one second set of at least two resistors, said at least one individual and at least one second set of at least two resistors are electrically linked together so as to use the first resistor of a second set individually or in serial with one or more of the following resistors of the same set, said resistors transferring the maximum of energy to the flow of liquid and allowing a finer control of the liquid temperature ~~the system according to claim 17~~, wherein the electricity power in said resistors and/or set of resistors is controlled so as to provide to the liquid the required energy in real-time to reach ~~the~~ a liquid target temperature according to the energy balance.

Claim 19 (currently amended) A process according to claim 18, wherein the flow-rate ~~of the liquid is comprised between 50 and 300 ml/min for a coffee machine and between 300 and 5000 ml/min for a vending machine.~~

Claim 20 (new) A device according to claim 3, wherein the insert can be rotated along its axis of symmetry.

Claim 21 (new) A device according to claim 17, wherein the set of resistors is disposed on a tube, the tube including the flow path.

Claim 22 (new) A device according to claim 21, wherein the apparatus comprises further a cylindrical insert, which is disposed inside the tube, along an entire length of the tube and substantially along an axis of symmetry of the tube.

Claim 23 (new) A process according to claim 18, wherein the flow-rate of the liquid is between 300 and 5000 ml/min.

Claim 24 (new) The process of claim 19, wherein the device is a coffee machine.

Claim 25 (new) The process of claim 23, wherein the device is a vending machine.